

CLAIMS

What is claimed is:

1. A device for grabbing a rail panel, the rail panel having a first and a second spaced apart rail, the device comprising:

a frame; and

a plurality of moveable elements coupled to said frame, said moveable elements constrained to move outwardly in order to contact respective rails;

wherein, when said plurality of moveable elements move outwardly, said device is fixed to the first and second spaced apart rails.
2. The device of claim 1, further comprising a rotator connected to said frame.
3. The device of claim 2, wherein said rotator is hydraulically operated.
4. The device of claim 2, wherein said frame further comprises notches sized and configured such that the first and second rails fit within said notches when said frame is in contact with the first and second rails.

5. The device of claim 4, wherein said moveable elements further comprise:

a first hydraulic cylinder located at a first end of said frame, said first hydraulic cylinder being connected to a first pair of pins; and

a second hydraulic cylinder located at a second end of said frame, said second hydraulic cylinder being connected to a second pair of pins;

wherein, when said hydraulically operated elements are actuated, said first hydraulic cylinder forces said first pair of pins into contact with an inside surface of each of the first and second rails, and wherein, when said hydraulically operated elements are actuated, said second hydraulic cylinder forces said second pair of pins into contact with an inside surface of each of the first and second rails, thus fixing said frame to the rails.

6. The device of claim 5, wherein said pins comprise metal having a diameter of at least 2 inches.

7. The device of claim 5, further comprising a piece of equipment capable of lifting and transporting said device when said device is fixed to the rail panel.

8. The device of claim 7, wherein said piece of equipment has an operator, said operator being able to attach said device to the rail panel, lift the rail panel, and transport the rail panel without additional human assistance.

9. The device of claim 8, wherein said device can be attached to the rail panel at a point offset from a center of the panel.

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10. A modular device for grabbing a rail panel, the rail panel comprising a first and a second spaced apart rail, the device comprising:

a frame;

a rotator coupled to said frame; and

a plurality of hydraulically operated elements coupled to said frame;

wherein, when said hydraulically operated elements are actuated, said frame is fixed to the first and second spaced apart rails, and wherein said device can be connected to a piece of equipment capable of moving said device when it is fixed to the first and second rails.

11. The device of claim 10, wherein said rotator is hydraulically operated.

12. The device of claim 10, wherein said frame further comprises notches sized and configured such that the first and second rails fit within said notches when said frame is in contact with the first and second rails.

13. The device of claim 12, wherein said elements are pins and further comprising:

a first hydraulic cylinder located at a first end of said frame, said first hydraulic cylinder being connected to a first pair of said pins; and

a second hydraulic cylinder located at a second end of said frame, said second hydraulic cylinder being connected to a second pair of said pins;

wherein, when said pins are actuated, said first hydraulic cylinder forces said first pair of pins into contact with an inside surface of each of the first and second rails, and wherein, when said pins are actuated, said second hydraulic cylinder forces said second pair of pins into contact with an inside surface of each of the first and second rails, thus fixing said frame to the rails.

14. The device of claim 13, wherein said piece of equipment has an operator, said operator being able to attach said device to the rail panel, lift the rail panel, and transport the rail panel without additional human assistance.

15. The device of claim 14, wherein said device can be attached to the rail panel at a point offset from a center of the panel.

16. A system for lifting and transporting a rail panel, the rail panel comprising a first and a second spaced apart rail, wherein each rail is attached to a plurality of ties, the system comprising:

a frame;

a plurality of hydraulically operated pins coupled to said frame, wherein, when said hydraulically operated pins are actuated, said frame is fixed to the first and second spaced apart rails; and

a piece of equipment capable of lifting said frame while said frame is fixed to said rails.

17. The system of claim 16, wherein said piece of equipment provides hydraulic power to said hydraulically operated pins.

18. The system of claim 16, further comprising a rotator connected to said frame, wherein said piece of equipment provides hydraulic power to said hydraulically operated pins and to said rotator.

19. The system of claim 16, wherein said frame further comprises notches sized and configured such that the first and second rails fit within said notches when said frame is in contact with the first and second rails.

20. The system of claim 19, wherein said hydraulically operated elements further comprise:

a first hydraulic cylinder located at a first end of said frame, said first hydraulic cylinder being connected to a first pair of said pins; and

a second hydraulic cylinder located at a second end of said frame, said second hydraulic cylinder being connected to a second pair of said pins;

wherein, when said hydraulically operated pins are actuated, said first hydraulic cylinder forces said first pair of pins into contact with an inside surface of each of the first and second rails, and wherein, when said hydraulically operated pins are actuated, said second hydraulic cylinder forces said second pair of pins into contact with an inside surface of each of the first and second rails, thus fixing said frame to the rails.

21. The system of claim 20, wherein said pins comprise metal having a diameter of at least 2 inches.

22. The system of claim 20, wherein said piece of equipment has an operator, said operator being able to attach said device to the rail panel, lift the rail panel, and transport the rail panel without additional human assistance.

23. The system of claim 22, wherein said device can be attached to the rail panel at a point offset from a center of the panel.

24. A device for grabbing a rail panel, the rail panel having a first and a second spaced apart rail, the device comprising:

a frame capable of being mounted on the rails; and

a plurality of moveable elements coupled to said frame such that, when said moveable elements contact the rails device is fixed to the rails.

25. The device of claim 24, wherein said frame further comprises notches sized and configured such that the first and second rails fit within said notches when said frame is mounted on the first and second rails.

26. The device of claim 25, wherein said moveable elements further comprise:

a first hydraulic cylinder located at a first end of said frame, said first hydraulic cylinder being connected to a first pair of pins; and

a second hydraulic cylinder located at a second end of said frame, said second hydraulic cylinder being connected to a second pair of pins;

wherein, when said hydraulically operated pins are actuated, said first hydraulic cylinder forces said first pair of pins into contact with each of the first and second rails, and wherein, when said hydraulically operated pins are actuated, said second hydraulic cylinder forces said second pair of pins into contact with each of the first and second rails, thus fixing said frame to the rails.

27. The device of claim 24, further comprising a piece of equipment capable of lifting and moving said frame when said frame is attached to the rails, and wherein said piece of equipment has an operator, said operator being able to attach said device to the rail panel, lift the rail panel, and transport the rail panel without additional human assistance.

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